English Spanish

9 Chapter Test

Check It Out
Test Practice
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Write the product using exponents.

1. $(-15) \cdot (-15) \cdot (-15)$

2. $\left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right)$

Evaluate the expression.

3. -2^3

4. $10 + 3^3 \div 9$

Simplify the expression. Write your answer as a power.

5. $9^{10} \cdot 9$

6. $\frac{(-3.5)^{13}}{(-3.5)^9}$

Evaluate the expression.

7. $5^{-2} \cdot 5^2$

8. $\frac{-8}{(-8)^3}$

Write the number in standard form.

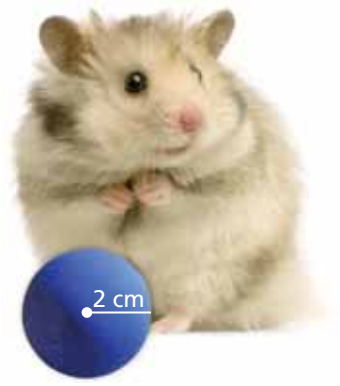
9. 3×10^7

10. 9.05×10^{-3}

Multiply. Write your answer in scientific notation.

11. $(7 \times 10^3) \times (5 \times 10^2)$

12. $(3 \times 10^{-5}) \times (2 \times 10^{-3})$



13. HAMSTER A hamster toy is in the shape of a sphere. The volume V of a sphere is represented by $V = \frac{4}{3}\pi r^3$, where r is the radius of the sphere. What is the volume of the toy? Round your answer to the nearest cubic centimeter. Use 3.14 for π.

14. CRITICAL THINKING Is $(xy^2)^3$ the same as $(xy^3)^2$? Explain.

15. RICE A grain of rice weighs about 3^3 milligrams. About how many grains of rice are in one scoop?

16. TASTE BUDS There are about 10,000 taste buds on a human tongue. Write this number in scientific notation.

17. LEAD From 1978 to 2008, the amount of lead allowed in the air in the United States was 1.5×10^{-6} gram per cubic meter. In 2008, the amount allowed was reduced by 90%. What is the new amount of lead allowed in the air?

One scoop of rice weighs about 3^9 milligrams.